

CLAIMS

What is claimed is:

1. An axle housing assembly comprising:
a first housing portion including a first attachment interface and at least one first suspension flange; and
a second housing portion including a second attachment interface and at least one second suspension flange positioned in an overlapping relationship with said first suspension flange to define a suspension mount interface for supporting a suspension load wherein said first and second housing portions are permanently attached to each other along said first and second attachment interfaces.
2. The assembly of claim 1 including a seam weld extending along said first and second attachment interfaces.
3. The assembly of claim 2 wherein said first housing portion includes a first pair of vertical sides, an upper horizontal surface interconnecting said first pair of vertical sides, and a pair of lower weld surfaces formed on distal edges of said vertical sides with said first attachment interface being defined along said pair of lower weld surfaces and wherein said second housing portion includes a second pair of vertical sides, a lower horizontal surface interconnecting said second pair of vertical sides, and a pair of upper weld surfaces formed on distal edges of said second pair of vertical sides with said second attachment interface being defined along said pair of upper weld surfaces.

4. The assembly of claim 2 wherein said first suspension flange extends outwardly from a vertical side wall of said first housing portion and said second suspension flange extends outwardly from a vertical side wall of said second housing portion.
5. The assembly of claim 4 wherein said first and second suspension flanges are perpendicular to said vertical side walls.
6. The assembly of claim 4 wherein said first and second suspension flanges include radiussed corners.
7. The assembly of claim 1 wherein said first and second housing portions each include a center section with a first leg portion extending outwardly from a first side of said center section and a second leg portion extending outwardly from a second side of said center section opposite from said first side, said first leg portion including said first and second suspension flanges forming said suspension mount interface as a first suspension mount interface and wherein said second leg portion includes a third suspension flange formed on said first housing portion and a fourth suspension flange formed on said second housing portion and positioned in an overlapping relationship to said third suspension flange to define a second suspension mount interface.

8. The assembly of claim 1 including at least one aperture formed in each of said first and second suspension flanges and at least one fastener installed within said aperture to secure a suspension component to said first and second housing portions.
9. The assembly of claim 1 including a suspension weld interface defined by at least one of said first or second suspension flanges wherein a suspension component is permanently attached to said first and second housing portions along said suspension weld interface.
10. The assembly of claim 1 wherein said suspension mount interface accommodates a plurality of different suspensions including at least a first suspension having a first spring center and a second suspension having a second spring center that is narrower than said first spring center.
11. The assembly of claim 1 wherein at least one of said first or second housing portions includes at least one indentation extending inwardly toward an axle housing centerline, said indentation forming a pocket for a fastener.

12. An axle assembly comprising;

a first axle housing half including a first center portion, a first leg portion extending outwardly from one side of said first center portion, a second leg portion extending outwardly from an opposite side of said first center portion, at least one first suspension flange extending outwardly from said first leg portion, and at least one second suspension flange extending outwardly from said second leg portion; and

a second axle housing half including a second center portion, a third leg portion extending outwardly from one side of said second center portion, a fourth leg portion extending outwardly from an opposite side of said second center portion, at least one third suspension flange extending outwardly from said third leg portion, and at least one fourth suspension flange extending outwardly from said fourth leg portion wherein said first and third suspension flanges are positioned in an overlapping relationship to define a first suspension mount interface and said second and fourth suspension flanges are positioned in an overlapping relationship to define a second suspension mount interface.

13. The assembly of claim 12 including a first weld interface formed along at least a portion of said first axle housing half and a second weld interface formed along at least a portion of said second axle housing half wherein said first and second weld interfaces cooperate to form a seam weld that permanently secures said first axle housing half to said second axle housing half.

14. The assembly of claim 12 wherein said at least one first suspension flange comprises a first fore suspension flange and a first aft suspension flange and said at least one second suspension flange comprises a second fore suspension flange and a second aft suspension flange, said first and second fore suspension flanges being positioned in an overlapping relationship to define a first fore mount of said first suspension mount interface and said first and second aft suspension flanges being positioned in an overlapping relationship to define a first aft mount of said first suspension mount interface and wherein said at least one third suspension flange comprises a third fore suspension flange and a third aft suspension flange and said at least one fourth suspension flange comprises a fourth fore suspension flange and a fourth aft suspension flange, said third and fourth fore suspension flanges being positional in a overlapping relationship to define a second fore mount of said second suspension mount interface and said third and fourth aft suspension flanges being positioned in an overlapping relationship to define a second aft mount of said second mount interface.

15. A method for forming a suspension mount interface on an axle housing comprising the steps of:

- (a) forming at least one first suspension flange on a first axle housing half;
- (b) forming at least one second suspension flange on a second axle housing half;
- (c) aligning the first and second suspension flanges in an overlapping relationship;

and

(d) welding the first and second axle housing halves to each other along a weld interface to define a suspension mount interface with the first and second suspension flanges.

16. The method of claim 15 further including the steps of integrally forming the first suspension flange with the first axle housing half and integrally forming the second suspension flange with the second axle housing half.

17. The method of claim 15 including the step of attaching a vehicle suspension component to the first and second suspension flanges.

18. The method of claim 15 including steps of forming at least one indentation in a vertical wall of at least one of the first or second axle housing halves, positioning a fastener within the indentation, and fastening a suspension component to the first and second flanges with the fastener.

19. The method of claim 15 including the steps of defining a first suspension spring center relative to the suspension mount interface using the first and second suspension flanges and defining a second suspension spring center relative to the suspension mount interface using the same first and second suspension flanges wherein the second suspension spring center is narrower than the first suspension spring center.

20. The method of claim 19 including the step of changing from the first suspension spring center to the second suspension spring center by moving a suspension attachment position laterally along the first and second suspension flanges.